

Weekly Report for 12/14/2015

Highlights

- Achieved 1Hz booster operations. (Chih-Yuan Yao)

APS Renewal and Upgrade

- Finalized and resolved problem of geometry of the fastkicker with Argonne Physics dept. (Chih-Yuan Yao)
- Achieved 1Hz booster beam by adjusting and optimization of FreeWheeling diode timings. (Chih-Yuan Yao)
- Worked with vendor to finalize feedthrough and air-slide connector designs. (Chih-Yuan Yao)
- Investigated differential TDR measurement for HV fastKicker evaluation. (Chih-Yuan Yao)
- Provided MOGA solution of V6 lattice (with high-betax for accumulation) for commissioning simulations; copied lattice files to CVS. (Yipeng Sun)
- Investigate alternate lattice for better performance with high-betax. (Yipeng Sun)

MCR Operations

Storage Ring Operations

- Assisted the MCR with investigation into beam motion. (Karen Schroeder)
- Assisted MCR with turning beam over to Users after machine studies (Karen Schroeder)
- Sent information to ACOs operators about how to handle abort kicker now being used, 1 Hz injection, and the change in resolution of pinhole camera all now being integrated into operations. (Karen Schroeder)
- Sent information to regarding why we removed S35ID:P1 from orbit correction in the vertical plane to Sereno and Yang. (Karen Schroeder)
- Investigated a battery failure of the VSA with Randy and Rob Keane. (Chih-Yuan Yao)

Training

- Reviewed and gave hands-on training for the new steering procedure to operators/ACOs not present during Emery's presentation during machine studies. Passed on Fystro's questions/suggestions to Emery. (Karen Schroeder)

MCR Operations administrative/misc.

- Produced downtime report for OPS Directorate and either presented it myself or gave to Flood for presentation (Karen Schroeder)
- Published the long-range schedule, modified the html and excel files and generated the pdf file for posting by the webmaster. (Karen Schroeder)
- Reviewed and approved non-RSS work requests, primarily for upcoming shutdown. (Karen Schroeder)
- Reviewed and Handling Waveguide Air Pressure Switch Trips and added it to required reading for Operators (Karen Schroeder)

APS Machine Studies

Storage Ring Studies

- Performed gap scans to update Gap Feedforward tables and added back any BPMS which were removed because of steering (Karen Schroeder)
- Generated the beam-related portion of the machine studies schedule due to unavailability of the usual scheduler. (Karen Schroeder)
- Discussed when beamlines were coming off-line with floor coordinator and made arrangements to keep 35-ID and 35-BM on-line for studies if needed. (Karen Schroeder)
- Showed Hairong errors I received during a single gap scan and so you could update the PEM, did initial test which seemed to be OK. Will test again during start-up next run. (Karen Schroeder)
- Assisted MCR during non-beam studies when needed. (Karen Schroeder)
- Lattice design of 1.5 meter long HSCU in sector 32; achieved 10mm by 7mm diameters in X and Y. (Yipeng Sun)

Booster Studies

- Created longer than 475 ms ramp waveform for a test during study. (Chih-Yuan Yao)
- Tested DC mode of booster correctors with AI and Shifu. We found that even with DC ramp loaded the IOC still output ramping waveforms. (Chih-Yuan Yao)

PAR Studies

- Performed par high charge radiation survey with Vacca and hp group, and report result to APS-U. (Chih-Yuan Yao)

APS Machine Research and Development

Booster Research and Development

- Coordinated booster BPM upgrade work with Diag group and control group. (Chih-Yuan Yao)

APS Machine Software

Storage Ring

- Added delay variables to the SR tune measurement GUI with Hairong and Louis. (Chih-Yuan Yao)

Injectors

- Tested and installed a 1Hz/2Hz switching pem for operations with Hairong. (Chih-Yuan Yao)

Meetings, workshops, conferences, committees, LMS related, and reviews

- Attended shutdown planning meeting (Karen Schroeder)
- Attended beam stability working group meeting (Karen Schroeder)
- Reviewed proposal submitted to RSPPC for vote and submitted vote (Karen Schroeder)
- Reviewed one paper for Physical Review Special Topics - Accelerators and Beams (PRST-AB). (Yipeng Sun)

Safety and Required Training

- Successfully completed Cyber Security Education and Awareness and Building/Facilities Safety Orientation required training (Karen Schroeder)